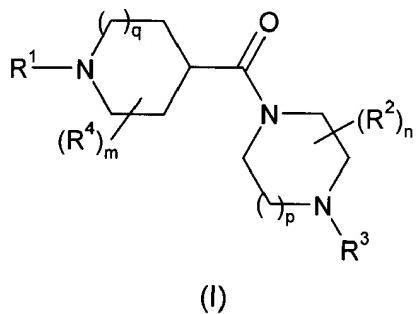


Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

What is claimed is:

1. (Currently Amended) A compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof:



wherein:

R¹ represents aryl, heteroaryl, -aryl-X-C₃₋₇ cycloalkyl, -heteroaryl-X-C₃₋₇ cycloalkyl, -aryl-X-aryl, -aryl-X-heteroaryl, -aryl-X-heterocycl, -heteroaryl-X-heteroaryl, -heteroaryl-X-aryl or -heteroaryl-X-heterocycl;

wherein said aryl, heteroaryl and heterocycl groups of R¹ may be optionally substituted by one or more substituents which may be the same or different, and which are selected from the group consisting of halogen, hydroxy, cyano, nitro, oxo, haloC₁₋₆ alkyl, polyhaloC₁₋₆ alkyl, haloC₁₋₆ alkoxy, polyhaloC₁₋₆ alkoxy, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkylthio, C₁₋₆ alkoxyC₁₋₆ alkyl, C₃₋₇ cycloalkylC₁₋₆ alkoxy, -COC₁₋₆ alkyl, -COC₁₋₆ alkyl-halogen, -COC₁₋₆ alkyl-cyano, C₁₋₆ alkoxy carbonyl, C₁₋₆ alkylsulfonyl, C₁₋₆ alkylsulfinyl, C₁₋₆ alkylsulfonyloxy, C₁₋₆ alkylsulfonylC₁₋₆ alkyl, C₁₋₆ alkylsulfonamidoC₁₋₆ alkyl, C₁₋₆ alkylamidoC₁₋₆ alkyl, aryl, arylsulfonyl, arylsulfonyloxy, aryloxy, arylsulfonamido, arylcarboxamido, aroyl, NR¹⁵R¹⁶, -CONR¹⁵R¹⁶, -NR¹⁵COR¹⁶, -C(R¹⁵)=NOR¹⁶, -NR¹⁵SO₂R¹⁶ and -SO₂NR¹⁵R¹⁶, wherein R¹⁵ and R¹⁶ independently represent hydrogen or C₁₋₆ alkyl or together form a heterocyclic ring;

X represents a bond, O, CO, SO₂, OCH₂ or CH₂O;

each R² and R⁴ independently represents C₁₋₄ alkyl;

R³ represents C₃₋₈ alkyl, C₃₋₆ alkenyl, C₃₋₆ alkynyl, C₃₋₆ cycloalkyl, C₅₋₆ cycloalkenyl or -C₁₋₄ alkyl-C₃₋₆ cycloalkyl;

wherein said C₃₋₆ cycloalkyl groups of R³ may be optionally substituted by one or more substituents which may be the same or different, and which are selected from the group consisting of halogen, C₁₋₄ alkyl and trifluoromethyl;

m and n independently represent 0, 1 or 2;

p and q each independently represent 1 or 2;
~~or a solvate thereof.~~

2. (Currently Amended) A compound of formula (I) as defined in claim 1 wherein R¹ represents

-aryl optionally substituted by 1, 2 or 3 halogen, C₁₋₆ alkyl, polyhaloC₁₋₆ alkyl, C₁₋₆ alkoxy, polyhaloC₁₋₆ alkoxy, -COC₁₋₆ alkyl, -C(R¹⁵)=NOR¹⁶, -NR¹⁵COR¹⁶, -COC₁₋₆ alkyl-halogen, -COC₁₋₆ alkyl-cyano, cyano or C₁₋₆ alkoxycarbonyl groups;

-aryl-X-C₃₋₇ cycloalkyl;

-aryl-X-aryl;

-aryl-X-heterocyclyl optionally substituted by 1, 2 or 3 halogen or oxo groups;

-aryl-X-heteroaryl optionally substituted by a C₁₋₆ alkyl or aryl group;

~~-heterocyclyl optionally substituted by 1, 2 or 3 C₁₋₆ alkyl or COC₁₋₆ alkyl groups;~~

heteroaryl optionally substituted by 1, 2 or 3 cyano, halogen, polyhaloC₁₋₆ alkyl, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxycarbonyl or -CONR¹⁵R¹⁶ groups;

-heteroaryl-X-aryl optionally substituted by 1, 2 or 3 cyano or C₁₋₆ alkylsulfonyl groups;

-heteroaryl-X-heterocyclyl; or

-heteroaryl-X-heteroaryl.

3. (Original) A compound of formula (I) as defined in claim 2 wherein R¹ represents

phenyl, naphthyl or indanone optionally substituted by 1, 2 or 3 halogen, C₁₋₆ alkyl, polyhaloC₁₋₆ alkyl, C₁₋₆ alkoxy, polyhaloC₁₋₆ alkoxy, -COC₁₋₆ alkyl, -C(R¹⁵)=NOR¹⁶, -NR¹⁵COR¹⁶, -COC₁₋₆ alkyl-halogen, -COC₁₋₆ alkyl-cyano, cyano or C₁₋₆ alkoxycarbonyl groups;

-phenyl-CO-cyclopropyl or -phenyl-CO-cyclobutyl;

-phenyl-thiazolyl, -phenyl-oxadiazolyl, -phenyl-pyrrolyl, -phenyl-oxazolyl or -phenyl-isoxazolyl optionally substituted by a C₁₋₆ alkyl or aryl group; or

pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, quinolinyl, isoquinolinyl or benzothiazolyl optionally substituted by 1, 2 or 3 cyano, halogen, polyhaloC₁₋₆ alkyl, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₁₋₆ alkoxycarbonyl or -CONR¹⁵R¹⁶ groups.

4. (Original) A compound of formula (I) as defined in claim 3 wherein R¹ represents

phenyl optionally substituted by 1, 2 or 3 halogen, polyhaloC₁₋₆ alkyl, -NR¹⁵COR¹⁶, -COC₁₋₆ alkyl or cyano groups;

-phenyl-CO-cyclopropyl;

-phenyl-oxadiazolyl or -phenyl-oxazolyl optionally substituted by a C₁₋₆ alkyl or aryl group; or

pyridyl, pyrimidyl, pyrazinyl, pyridazinyl or quinolinyl optionally substituted by 1, 2 or 3 halogen, polyhaloC₁₋₆ alkyl, C₁₋₆ alkyl or cyano groups.

5. (Original) A compound of formula (I) as defined in claim 4 wherein R¹ represents

phenyl optionally substituted at the 4-position by a -COMe, -COEt or cyano group; or

pyridyl or quinolinyl optionally substituted by a methyl or CF₃ group.

6. (Original) A compound of formula (I) as defined in claim 5 wherein R¹ represents

- 6-CF₃-pyridin-3-yl.

7. (Previously Amended) A compound of formula (I) as defined in claim 1 wherein X represents a bond, O or CO.

8. (Original) A compound of formula (I) as defined in claim 7, wherein X represents a bond or CO.

9. (Previously Amended) A compound of formula (I) as defined in claim 1 wherein m represents 0.

10. (Cancelled)

11. (Original) A compound of formula (I) as defined in claim 10 wherein n represents 0 or 1.

12. (Previously Amended) A compound of formula (I) as defined in claim 10 wherein R² represents methyl.

13. (Original) A compound of formula (I) as defined in claim 11 wherein n represents 0.

14. (Cancelled).

15. (Previously Amended) A compound of formula (I) as defined in claim 1 wherein R³ represents C₃₋₈ alkyl or C₃₋₆ cycloalkyl.

16. (Original) A compound of formula (I) as defined in claim 15 wherein R³ represents isopropyl, isobutyl or cyclobutyl.

17. (Original) A compound of formula (I) as defined in claim 16 wherein R³ represents isopropyl or cyclobutyl.

18. (Original) A compound of formula (I) as defined in claim 17 wherein R³ represents isopropyl.

19. (Cancelled)

20. (Currently Amended) A compound of formula (I) as defined in claim 1 which is 1-Isopropyl-4-[1-(5-cyano-pyridin-2-yl)-piperidine-4-carbonyl]-piperazine;

1-Isopropyl-4-[1-(5-methoxycarbonyl-4-trifluoromethylpyridin-2-yl)-piperidine-4-carbonyl]-piperazine;

1-Isopropyl-4-[1-(4-ethoxycarbonylphenyl)-piperidine-4-carbonyl]-piperazine;

1-Cyclobutyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-piperazine;

1-Cyclobutyl-4-[1-(4-cyano-3-fluorophenyl)-piperidine-4-carbonyl]-piperazine;

1-Cyclobutyl-4-[1-(4-cyano-2,6-difluorophenyl)-piperidine-4-carbonyl]-piperazine;

1-Cyclobutyl-4-[1-(4-cyano-3-trifluoromethylphenyl)-piperidine-4-carbonyl]-piperazine;

1-Cyclobutyl-4-[1-(4-cyano-naphthalen-1-yl)-piperidine-4-carbonyl]-piperazine;
1-Cyclobutyl-4-[1-(5-cyanopyridin-2-yl)-piperidine-4-carbonyl]-piperazine;
1-Cyclobutyl-4-[1-(6-trifluoromethylpyridin-2-yl)-piperidine-4-carbonyl]-piperazine;
1-Cyclobutyl-4-[1-(5-trifluoromethylpyridin-2-yl)-piperidine-4-carbonyl]-piperazine;
1-Cyclobutyl-4-[1-(3-chloro-5-trifluoromethylpyridin-2-yl)-piperidine-4-carbonyl]-piperazine;

1-Isopropyl-4-{1-[5-(4-methylsulfonylphenyl)-pyrimidin-2-yl]-piperidine-4-carbonyl}-piperazine;

1-Isopropyl-4-{1-[4-(morpholino-carbonyl)-phenyl]-piperidine-4-carbonyl}-piperazine;

1-Cyclopentyl-4-[1-(4-cyano-phenyl)-piperidine-4-carbonyl]-piperazine;

(2R,6S)-1-Cyclobutyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-2,6-dimethylpiperazine;

1-Isopentyl-4-[1-(5-cyano-pyridin-2-yl)-piperidine-4-carbonyl]-piperazine;

4-Cyclobutyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

4-Cyclobutyl-4-[1-(5-cyanopyridin-2-yl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-2,5-difluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-3-chlorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-3-fluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-2,6-difluoro-phenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-2-fluoro-phenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-3-trifluoromethyl-phenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-trifluoromethyl-phenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-naphthalen-1-yl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(3,4-dichlorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-trifluoromethoxyphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-difluoromethoxyphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-phenoxyphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(6-methoxypyridin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(4-cyano-2,3-difluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Isopropyl-4-[1-(4-cyano-2-chlorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Cyclobutyl-4-[1-(4-cyano-2-chlorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Cyclobutyl-4-[1-(4-cyano-3-chlorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Cyclobutyl-4-[1-(4-cyano-3-fluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Cyclobutyl-4-[1-(4-cyano-3-trifluoromethylphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

1-Cyclobutyl-4-[1-(4-cyano-2,5-difluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane;

(S)-1-Isopropyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-2-methylpiperazine;

(S)-1-Isopropyl-4-[1-(6-cyanopyridin-3-yl)-piperidine-4-carbonyl]-2-methylpiperazine;

(S)-1-Isopropyl-4-[1-(5-cyanopyridin-2-yl)-piperidine-4-carbonyl]-2-methylpiperazine;

(S)-1-Isopropyl-4-[1-(5-trifluoromethyl-pyrazin-2-yl)-piperidine-4-carbonyl]-2-methyl piperazine;

(S)-1-Isopropyl-4-[1-(6-trifluoromethyl-pyridazin-3-yl)-piperidine-4-carbonyl]-2-methyl piperazine;

1-Isopropyl-4-{1-[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]-piperidine-4-carbonyl} piperazine;

1-Isopropyl-4-[1-(quinolin-6-yl)-piperidine-4-carbonyl] piperazine;

1-Cyclobutyl-4-[1-(6-trifluoromethylpyridin-3-yl)-piperidine-4-carbonyl] piperazine; 1-Isopropyl-4-[1-(5-trifluoromethyl-pyrazin-2-yl)-piperidine-4-carbonyl]-piperazine; (S)-1-Isobutyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-piperazine; 1-Isopropyl-4-[1-(4-cyclopropylcarbonylphenyl)-piperidine-4-carbonyl]-piperazine; 1-Isopropyl-4-[1-(2-methyl-quinolin-6-yl)-piperidine-4-carbonyl]-piperazine; 1-Isopropyl-4-[1-(6-cyano-pyridin-3-yl)-piperidine-4-carbonyl]-piperazine; 1-Cyclobutyl-4-[1-(6-trifluoromethylpyridin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Cyclobutyl-4-[1-(2-cyanopyridin-4-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(6-trifluoromethylpyridazin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(5-trifluoromethylpyrazin-2-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-[4-(2-methyl-1,3-oxazol-5-yl)phenyl]-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-[4-(3-methyl-1,2,4-oxadiazol-5-yl)phenyl]-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(4-acetamido-3-fluorophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Cyclobutyl-4-[1-(4-acetylphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Cyclobutyl-4-[1-(6-cyano-pyridin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(6-cyano-pyridin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(2-methyl-quinolin-4-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-[4-(3-methyl-1,2,4-oxadiazol-5-yl)phenyl]-piperidine-4-carbonyl]-piperazine; 1-Isopropyl-4-[1-(2-trifluoromethylpyrimidin-5-yl)-piperidine-4-carbonyl]-[1,4]-diazepane; or a pharmaceutically acceptable salt or solvate thereof.

21. (Currently Amended) A compound of formula (I) as defined in claim 1 which is

1-Isopropyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-piperazine; 1-Isopropyl-4-[1-(4-cyanophenyl)-piperidine-4-carbonyl]-[1,4]-diazepane; (S)-1-Isopropyl-4-[1-(6-trifluoromethylpyridin-3-yl)-piperidine-4-carbonyl]-2-methylpiperazine; 1-Isopropyl-4-[1-(4-acetylphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane; 1-Isopropyl-4-[1-(4-propanoylphenyl)-piperidine-4-carbonyl]-[1,4]-diazepane; or a pharmaceutically acceptable salt or solvate thereof.

22. (Currently Amended) A compound of formula (I) as defined in claim 1 which is

1-isopropyl-4-[1-(6-trifluoromethylpyridin-3-yl)-piperidine-4-carbonyl]-piperazine;
~~1-isopropyl-4-[1-(6-trifluoromethylpyridin-3-yl)-piperidine-4-carbonyl]-[1,4]-diazepane;~~

or a pharmaceutically acceptable salt or solvate thereof.

23. (Previously Amended) A pharmaceutical composition which comprises the compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier or excipient.

24. (Cancelled)

25. (Cancelled)

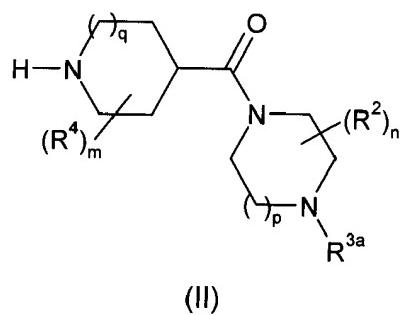
26. (Cancelled)

27. (Currently Amended) A method of treatment of a neurological diseases which comprises administering to a host in need thereof an effective amount of a compound of formula (I) as defined in claim 1 or a pharmaceutically acceptable salt thereof, wherein said neurological disease is selected from the group consisting of Alzheimer's disease, mild cognitive impairment, and age-related memory dysfunction..

28. (Cancelled)

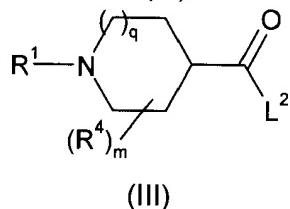
29. (Currently Amended) A process for the preparation of a compound of formula (I) or a pharmaceutically acceptable salt thereof, which process comprises:

(a) reacting a compound of formula (II)

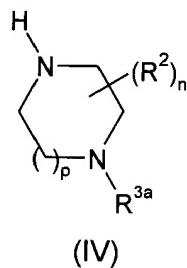


or an optionally activated or protected derivative thereof, wherein R², R⁴, m, n, p and q are as defined in claim 1 and R^{3a} is as defined for R³ in claim 1 or a group convertible to R³, with a compound of formula R¹-L¹, wherein R¹ is as defined in claim 1 and L¹ represents a suitable leaving group, such as a halogen atom followed by a deprotection reaction as necessary; or

- (b) reacting a compound of formula (III)



wherein R¹, R⁴, m and q are as defined in claim 1 and L² represents OH or a suitable leaving group, such as a halogen atom, with a compound of formula (IV)



wherein R², n and p are as defined in claim 1 R^{3a} is as defined for R³ in claim 1 or a group convertible to R³; or

- (c) deprotecting a compound of formula (I) or converting groups which are protected; and optionally thereafter

- (d) interconversion to other compounds of formula (I).